

REMARKS

Claims 18-35 were pending and under consideration in the above-identified application. Claims 1-17 were previously cancelled. Applicants have amended claims 18, 26 and 27 and added new claims 36-41.

In the Office Action of December 6, 2010, claims 18-35 were rejected under 35 U.S.C. § 103(a).

Applicants would like to note that the changes to the claims were made solely for the purpose of more particularly pointing out and distinctly claiming the subject matter which Applicants regard as the invention. Support for these amendments and new claims 36-41 can be found on pages 11-12 of the originally filed specification. No new matter has been added.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 18-35 were rejected under 35 U.S.C. § 103(a) as being purportedly unpatentable over *Gee*. (US 2,630,378) in view of *Wright et al.* (US 5,141,823). The Examiner's rejection is traversed.

Gee discloses a system that includes an oxygen feed, a steam feed and a hydrocarbon feed where the oxygen feed and hydrocarbon feed are preheated before being sent to a burner nozzle that injects the oxygen and hydrocarbon mixture into a combustion chamber where it is burned. See, U.S. Pat. No. 2,630,378, Col. 5, l. 10-21. *Gee* then discloses injecting steam from the steam feed into the combustion chamber, after the mixture has burned, to capture the hydrogen produced by the combustion of the mixture. See, *Id.*

In contrast, independent claim 18 recites "at least one pump in fluid communication with said diesel fuel feed and configured to pressurize said diesel fuel feed to a predetermined

pressure at or greater than the critical pressure of water before the water and the diesel fuel are mixed,” claim 26 recites “means for pressurizing a diesel fuel feed to a pressure equal to or greater than the critical pressure of water before the diesel fuel is mixed with water” and claim 27 recites “at least one pump in fluid communication with said jet fuel feed and configured to pressurize said jet fuel feed to a predetermined pressure at or greater than the critical pressure of water before the water and the jet fuel are mixed.” *Gee* cannot be fairly viewed as disclosing this feature because *Gee* merely discloses heating an oxygen feed and a hydrocarbon feed before combusting the hydrocarbon and oxygen in a combustion chamber without disclosing any pressurization of the hydrocarbon feed before the hydrocarbon enters the combustion chamber.

Wright, similarly, fails to disclose anything pertaining to pressurizing diesel fuel, much less pressurizing diesel fuel to a pressure at or equal to the critical pressure of water.

As the Applicants’ specification discloses, by pressurizing the diesel or jet fuel feed to a pressure greater than or equal to the critical pressure of water, the SCW reactor operates in a more efficient manner with less of a requirement on the SCW reactor resulting in faster production of hydrogen. See, Original Application, at pg. 11, line 20 to pg. 12, line 2.

Therefore, *Gee* and *Wright*, either alone or in any known combination, fail to teach or suggest “at least one pump in fluid communication with said diesel fuel feed and configured to pressurize said diesel fuel feed to a predetermined pressure at or greater than the critical pressure of water before the water and the diesel fuel are mixed,” or “at least one pre-heater in thermal communication with said water feed and said diesel fuel feed and configured to heat water from said water feed and diesel fuel from said diesel fuel feed to a predetermined temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed,” as recited in claim 18, “means for pressurizing a diesel fuel feed to a pressure equal to or greater

than the critical pressure of water before diesel fuel is mixed with water,” or “means for preheating diesel fuel and water to a temperature equal to or greater than the critical temperature of water before the water and the diesel fuel are mixed,” as recited in claim 26, or “at least one pump in fluid communication with said jet fuel feed and configured to pressurize said jet fuel feed to a predetermined pressure at or greater than the critical pressure of water before the water and the jet fuel are mixed,” “at least one pre-heater in thermal communication with said water feed and said jet fuel and configured to heat water from said water feed and jet fuel from said jet fuel feed to a predetermined temperature equal to or greater than the critical temperature of water before the water and the jet fuel are mixed,” as recited in claim 27. As such Applicants respectfully request that the rejection of claims 18, 26 and 27 be withdrawn.

Because claims 19-25 and 28-35 depend from and include all of the limitations of at least one of claims 18, 26 or 27, *Gee* and *Wright* also fail to teach or suggest each of the elements of claims 19-25 and 28-35. As such, the Examiner’s rejection of each of claims 18-35 should be withdrawn.

II. Conclusion

In view of the above remarks, Applicant submits that claims 18-41 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

The Commissioner is hereby authorized to charge any additional fees which may be required, to Account No. 19-3140.

Respectfully submitted,

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